

**Appendix Table 5-49****S&E articles in agricultural sciences, by coauthorship attribute and selected region/country/economy: 2000–13**

Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
World														
Total articles	19,521	18,074	20,131	20,766	22,681	24,577	28,787	34,116	36,565	39,064	41,050	44,081	44,227	47,445
with multiple institutions	9,772	7,933	8,889	12,862	14,420	15,938	18,959	22,537	24,300	25,724	26,939	29,298	29,916	32,347
with domestic institutions only	16,670	15,757	17,505	17,096	18,672	20,235	23,745	28,414	30,408	32,578	34,261	36,471	36,316	38,685
with international institutions	2,851	2,317	2,626	3,670	4,009	4,342	5,042	5,702	6,157	6,486	6,789	7,610	7,911	8,760
Canada														
Total articles	1,044	908	1,007	1,083	1,227	1,123	1,322	1,436	1,375	1,474	1,472	1,476	1,551	1,452
with multiple institutions	558	416	508	778	856	801	940	1,049	1,007	1,108	1,086	1,108	1,199	1,148
with domestic institutions only	771	706	755	716	807	717	841	902	834	858	873	836	824	770
with international institutions	273	202	252	367	420	406	481	534	541	616	599	640	727	682
Mexico														
Total articles	187	170	206	243	280	314	357	444	519	547	611	817	702	725
with multiple institutions	144	120	139	202	237	258	313	382	435	457	483	670	580	613
with domestic institutions only	91	107	116	118	142	156	165	197	308	336	386	531	437	450
with international institutions	96	63	90	125	138	158	192	247	211	211	225	286	265	275



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Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
United States														
Total articles	4,796	4,228	4,660	4,992	5,655	5,629	5,745	6,402	6,301	6,224	6,265	6,213	6,316	6,362
with multiple institutions	2,701	2,059	2,461	3,444	3,910	3,981	4,098	4,539	4,464	4,545	4,465	4,606	4,765	4,896
with domestic institutions only	3,830	3,454	3,771	3,760	4,280	4,247	4,189	4,572	4,496	4,262	4,302	4,118	4,065	3,861
with international institutions	966	774	889	1,232	1,375	1,382	1,556	1,830	1,805	1,962	1,963	2,095	2,251	2,501
Argentina														
Total articles	201	240	275	224	267	277	346	395	432	422	511	516	531	550
with multiple institutions	110	129	151	167	207	211	258	293	327	317	385	408	425	471
with domestic institutions only	149	186	213	144	171	171	232	273	307	283	378	349	353	372
with international institutions	52	54	62	80	96	106	114	122	125	139	133	167	178	178
Brazil														
Total articles	794	568	842	845	986	1,113	2,390	2,765	3,727	4,133	4,379	4,691	4,832	5,040
with multiple institutions	664	404	420	724	851	929	2,047	2,322	3,098	3,491	3,703	3,963	4,059	4,182
with domestic institutions only	646	458	716	652	781	897	2,065	2,391	3,262	3,653	3,954	4,207	4,338	4,431
with international institutions	148	110	126	193	205	216	325	374	465	480	425	484	494	609
Chile														
Total articles	33	36	59	62	84	96	122	167	154	237	218	256	256	250
with multiple institutions	21	17	32	48	69	67	92	128	118	178	182	209	223	215



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Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total articles	325	305	288	349	397	377	381	450	403	389	467	456	533	487
with multiple institutions	212	165	180	245	297	266	276	333	318	297	355	376	422	395
with domestic institutions only	201	221	193	215	248	212	225	245	221	187	230	207	243	209
with international institutions	124	84	95	134	149	165	156	205	182	202	237	249	290	278
Finland														
Total articles	191	282	285	235	297	231	322	257	254	328	269	267	263	258
with multiple institutions	107	109	134	145	179	160	213	186	195	237	186	193	217	205
with domestic institutions only	129	234	219	174	221	153	238	178	151	202	170	165	133	128
with international institutions	62	48	66	61	76	78	84	79	103	126	99	102	130	130
France														
Total articles	959	814	838	895	977	977	1,156	1,237	1,240	1,267	1,371	1,348	1,352	1,348
with multiple institutions	581	470	483	626	722	742	910	991	981	1,055	1,168	1,131	1,184	1,238
with domestic institutions only	647	587	586	557	592	586	662	652	686	663	642	644	645	584
with international institutions	312	227	252	338	385	391	494	585	554	604	729	704	707	764
Germany														
Total articles	1,080	1,171	1,134	1,126	1,152	1,429	1,492	1,478	1,577	1,539	1,580	1,707	1,821	1,775
with multiple institutions	594	593	549	696	771	947	1,040	1,042	1,104	1,069	1,078	1,201	1,258	1,291
with domestic institutions only	759	845	800	747	730	934	920	910	945	892	922	925	1,061	993

Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
with international institutions	321	326	334	379	422	495	572	568	632	647	658	782	760	782
Greece														
Total articles	177	189	197	212	204	266	313	343	336	336	350	310	341	342
with multiple institutions	84	95	103	135	146	182	202	234	235	225	234	227	242	250
with domestic institutions only	140	146	153	149	140	202	236	251	256	242	234	202	238	207
with international institutions	37	43	44	63	64	64	77	92	80	94	116	108	103	135
Hungary														
Total articles	132	107	146	147	132	176	173	139	170	224	175	197	215	215
with multiple institutions	89	70	107	113	108	156	128	100	127	144	105	132	146	147
with domestic institutions only	104	83	115	118	94	121	115	79	107	155	113	137	139	141
with international institutions	28	24	31	29	38	55	58	60	63	69	62	60	76	74
Ireland														
Total articles	217	174	195	187	213	241	300	264	344	370	367	353	382	406
with multiple institutions	140	110	104	126	123	176	198	196	242	278	268	266	310	319
with domestic institutions only	138	116	147	128	150	145	189	137	198	222	252	198	199	224
with international institutions	79	58	48	59	63	96	111	127	146	148	115	155	183	182
Italy														
Total articles	578	533	717	928	847	1,037	923	1,541	1,381	1,757	1,563	1,614	1,562	1,979



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Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
with multiple institutions	327	280	401	580	539	765	608	1,151	971	1,161	1,041	1,124	1,127	1,443
with domestic institutions only	443	423	553	727	658	808	677	1,173	955	1,293	1,110	1,082	1,041	1,299
with international institutions	135	110	164	201	189	229	246	368	426	464	453	532	521	680
Netherlands														
Total articles	506	372	448	492	496	521	586	667	596	606	612	662	636	717
with multiple institutions	357	242	296	381	403	434	491	542	497	497	523	573	543	639
with domestic institutions only	255	206	278	260	222	231	246	309	257	267	247	248	257	241
with international institutions	251	166	170	232	274	290	340	358	339	339	365	414	379	476
Poland														
Total articles	259	316	304	295	342	430	386	503	569	749	766	795	875	980
with multiple institutions	131	153	112	169	211	255	239	317	294	372	366	388	461	520
with domestic institutions only	191	254	247	216	262	310	290	366	463	610	614	661	715	796
with international institutions	68	62	57	79	80	120	96	137	106	139	152	134	160	184
Portugal														
Total articles	111	112	127	128	128	160	235	271	274	316	374	425	424	463
with multiple institutions	71	72	75	98	103	125	180	206	225	256	296	343	367	385
with domestic institutions only	72	61	80	61	82	81	141	156	164	189	221	244	243	252



## National Science Board | Science & Engineering Indicators 2016

Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
with international institutions	39	51	47	67	46	79	94	115	110	127	153	181	181	211
Romania														
Total articles	11	7	7	10	13	19	11	29	56	95	83	117	195	190
with multiple institutions	5	2	6	9	10	17	9	22	35	55	50	68	111	122
with domestic institutions only	7	5	1	3	4	3	4	12	40	75	67	86	148	124
with international institutions	4	2	6	7	9	16	7	17	16	20	16	31	47	66
Spain														
Total articles	823	775	943	1,028	1,094	1,269	1,470	1,718	1,825	2,025	2,021	2,251	2,346	2,411
with multiple institutions	414	357	477	599	655	770	902	1,071	1,159	1,342	1,359	1,556	1,609	1,696
with domestic institutions only	640	628	729	745	803	926	1,060	1,233	1,277	1,410	1,330	1,442	1,471	1,514
with international institutions	183	147	214	283	291	343	410	485	548	615	691	809	875	897
Sweden														
Total articles	264	229	257	282	288	320	269	327	299	294	300	325	360	349
with multiple institutions	170	147	159	213	213	242	206	260	242	235	239	251	297	284
with domestic institutions only	142	125	143	142	155	166	140	146	125	140	122	141	130	136
with international institutions	122	104	114	140	133	154	129	181	174	154	178	184	230	213
United Kingdom														
Total articles	1,257	1,080	1,089	1,138	1,129	1,169	1,195	1,302	1,270	1,147	1,217	1,232	1,120	1,245



## National Science Board | Science & Engineering Indicators 2016

Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
with multiple institutions	829	679	663	855	821	872	853	960	973	864	924	942	882	1,002
with domestic institutions only	741	691	656	579	586	583	612	617	573	521	502	481	450	459
with international institutions	516	389	433	559	543	586	583	685	697	626	715	751	670	786
Norway														
Total articles	118	109	108	125	167	184	201	207	202	204	212	220	250	214
with multiple institutions	78	62	74	92	137	155	163	176	171	169	190	188	205	182
with domestic institutions only	68	68	64	75	96	91	102	115	103	102	93	112	116	88
with international institutions	50	41	44	50	71	93	99	92	99	102	119	108	134	126
Russia														
Total articles	226	190	202	197	205	196	203	207	205	219	209	200	178	201
with multiple institutions	86	53	71	78	99	84	104	114	107	107	93	116	98	116
with domestic institutions only	189	168	170	153	154	158	148	147	150	168	152	137	131	137
with international institutions	37	22	32	44	51	38	55	60	55	51	57	63	47	64
Switzerland														
Total articles	173	185	166	222	217	234	275	280	350	314	356	344	390	422
with multiple institutions	101	111	101	167	169	174	197	215	256	239	287	276	298	336
with domestic institutions only	100	117	101	103	93	106	124	115	171	122	122	105	173	160



## National Science Board | Science & Engineering Indicators 2016

Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
with international institutions	73	68	65	119	124	128	151	165	179	192	234	239	217	262
Iran														
Total articles	38	44	68	80	151	211	531	958	1,005	1,014	1,206	1,478	1,408	1,180
with multiple institutions	15	25	40	54	104	142	363	652	704	722	761	965	933	845
with domestic institutions only	29	29	45	51	99	156	420	822	841	815	1,028	1,268	1,172	918
with international institutions	9	15	23	29	52	55	111	136	164	199	178	210	236	262
Israel														
Total articles	181	146	150	162	173	166	148	177	173	187	150	184	173	193
with multiple institutions	125	83	96	116	130	123	121	130	140	144	109	147	133	158
with domestic institutions only	105	88	97	90	96	94	72	110	88	113	83	102	106	101
with international institutions	76	58	53	72	77	72	76	67	85	74	67	82	67	92
Saudi Arabia														
Total articles	41	31	35	27	35	26	73	64	62	84	131	167	213	286
with multiple institutions	9	12	7	11	16	7	26	31	27	45	78	116	148	230
with domestic institutions only	36	25	29	19	32	22	55	45	41	52	71	69	88	88
with international institutions	5	6	6	8	3	4	18	19	21	32	60	98	125	198
Turkey														
Total articles	238	246	351	450	651	630	917	892	963	1,398	1,408	1,356	1,182	1,207



## National Science Board | Science & Engineering Indicators 2016

Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
with multiple institutions	94	79	124	247	387	368	514	524	661	868	889	855	722	782
with domestic institutions only	201	217	296	358	514	528	800	779	832	1,246	1,272	1,206	1,009	992
with international institutions	37	29	55	92	137	102	117	113	131	152	136	150	173	215
Egypt														
Total articles	107	101	98	97	89	91	158	210	230	240	255	356	334	425
with multiple institutions	63	49	44	71	70	66	110	136	165	170	192	261	252	339
with domestic institutions only	62	77	70	48	37	44	86	152	138	124	139	178	157	179
with international institutions	45	24	28	49	52	47	72	58	92	116	116	178	177	246
South Africa														
Total articles	170	117	187	194	284	205	251	261	261	296	379	383	333	431
with multiple institutions	90	64	77	131	194	149	161	188	179	187	246	265	233	288
with domestic institutions only	130	82	143	128	200	133	156	163	163	193	255	226	197	259
with international institutions	40	35	44	66	84	72	95	98	98	103	124	157	136	172
China														
Total articles	543	564	943	1,067	1,314	2,162	2,446	3,077	3,653	4,203	4,906	6,121	6,227	8,406
with multiple institutions	213	160	257	638	858	1,389	1,734	2,148	2,534	2,859	3,415	4,062	4,402	5,617
with domestic institutions only	378	457	784	798	957	1,756	1,954	2,460	2,926	3,328	3,880	5,014	5,015	6,967



## National Science Board | Science & Engineering Indicators 2016

Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
with international institutions	165	107	159	269	357	406	492	617	727	875	1,026	1,107	1,212	1,439
India														
Total articles	1,054	1,071	998	1,134	1,176	1,278	1,487	1,826	2,215	2,201	2,310	2,403	2,639	2,859
with multiple institutions	351	293	333	513	584	674	696	890	986	985	1,191	1,220	1,376	1,582
with domestic institutions only	968	998	903	1,017	1,064	1,165	1,320	1,599	2,025	2,002	2,025	2,124	2,362	2,553
with international institutions	86	73	95	117	112	113	167	227	190	199	285	279	277	306
Japan														
Total articles	1,878	1,644	1,686	1,802	1,926	1,900	1,862	1,994	2,124	2,147	2,269	2,074	1,956	2,012
with multiple institutions	1,052	900	942	1,261	1,354	1,368	1,386	1,456	1,635	1,598	1,630	1,520	1,451	1,498
with domestic institutions only	1,602	1,409	1,467	1,443	1,526	1,485	1,428	1,519	1,589	1,642	1,776	1,547	1,411	1,476
with international institutions	276	235	219	359	400	415	434	475	535	505	493	527	545	536
Malaysia														
Total articles	80	50	64	60	84	70	121	164	230	330	423	575	624	734
with multiple institutions	48	31	34	43	58	56	92	117	159	229	287	402	452	566
with domestic institutions only	56	33	46	37	50	42	78	121	168	252	301	404	421	444
with international institutions	24	17	18	23	34	28	43	43	62	78	122	171	203	290
Singapore														
Total articles	9	7	22	17	30	32	47	41	39	39	54	53	54	70



## National Science Board | Science & Engineering Indicators 2016

Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
with multiple institutions	5	3	13	12	18	25	28	31	29	35	49	43	49	56
with domestic institutions only	5	4	12	5	15	11	25	15	15	15	17	18	19	19
with international institutions	4	3	10	12	15	21	22	26	24	24	37	35	35	51
South Korea														
Total articles	293	263	284	398	410	460	504	1,210	1,374	1,422	1,522	1,632	1,567	1,541
with multiple institutions	218	181	174	313	331	382	412	924	1,065	1,061	1,152	1,220	1,175	1,177
with domestic institutions only	176	166	193	234	266	260	293	935	1,053	1,123	1,188	1,295	1,199	1,143
with international institutions	117	97	91	164	144	200	211	275	321	299	334	337	368	398
Taiwan														
Total articles	164	156	196	194	202	237	273	360	360	440	498	519	461	456
with multiple institutions	85	84	102	137	141	170	204	269	292	349	409	424	370	373
with domestic institutions only	136	137	167	158	173	194	219	310	298	353	418	425	371	364
with international institutions	28	19	29	36	29	43	54	50	62	87	80	94	90	92
Australia														
Total articles	1,061	763	978	943	947	945	1,046	1,155	1,154	1,183	1,293	1,228	1,310	1,387
with multiple institutions	550	285	404	714	683	737	827	877	920	892	986	991	1,047	1,142
with domestic institutions only	843	611	803	641	639	613	708	772	677	740	777	694	688	729



## National Science Board | Science & Engineering Indicators 2016

Region/country/economy and coauthorship attribute	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
with international institutions	218	152	175	302	308	332	338	383	477	443	516	534	622	658
New Zealand														
Total articles	346	294	300	348	370	365	397	408	440	384	375	403	455	512
with multiple institutions	176	128	154	246	279	282	302	302	309	294	277	309	359	420
with domestic institutions only	248	223	220	195	215	212	205	226	256	199	213	212	230	245
with international institutions	98	71	80	153	155	153	192	182	184	185	162	191	225	267

**NOTES:** Article counts refer to publications from a selection of journals, books, and conference proceedings in S&E from Scopus. Articles are classified by their year of publication and are assigned to a region/country/economy on the basis of the institutional address(es) listed in the article. Articles are credited on a whole-count basis (i.e., each collaborating country/economy is credited with one count). Countries/economies with less than 1% of internationally coauthored articles in 2013 are omitted. Articles with multiple institutions are counts of articles with two or more institutional addresses. Articles with domestic institutions only are counts of articles with one or more institutional addresses all within a single country/economy. Articles with international institutions are counts of articles with institutional addresses from more than one country/economy.

**SOURCES:** National Science Foundation, National Center for Science and Engineering Statistics; SRI International; Science-Metrix; Elsevier, Scopus abstract and citation database ([www.scopus.com](http://www.scopus.com)).

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